



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

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OFFICE OF
ENVIRONMENTAL
CLEANUP

SEP 20 2018

Ms. Suzanne W. Bilbrey
Director, Environmental Management Directorate
Air Force Civil Engineer Center
2261 Hughes Avenue Suite 155
JBSA Lackland, Texas 78236-9853

Dear Ms. Bilbrey:

The U.S. Environmental Protection Agency has reviewed the Issues, Recommendations and Protectiveness Statement in the June 2018 Final Fourth Five-Year Review for Fairchild Air Force Base. The revisions made by the U.S. Air Force are acceptable. The EPA concurs with the identified issues, the recommended actions and the protectiveness statements for the four Operable Units covered in the Review. The Review evaluated the remedial actions implemented for OU-1, OU-2, OU-3 and OU-5.

The following are the EPA's protectiveness determinations that will be tracked by the EPA and reported to Congress in the EPA's annual report. Also included are issues raised in the Fourth Five-Year Review and recommendations to address them.

OU 1 – Craig Road Landfill Site

Protectiveness Deferred. A protectiveness determination of the remedy at OU-1 cannot be made until further information is obtained to assess vapor intrusion risk to potential off-base receptors, which requires an improved definition of the downgradient plume. A Uniform Federal Policy Quality Assurance Project Plan for investigation of the off-base downgradient trichloroethene plume will be completed by January 2019. It is expected that an assessment of the current protectiveness related to the buildings within the vicinity of known contamination will be completed by December 2019. A protectiveness determination will be made and submitted to the EPA as an addendum to the 2018 FYR by December 2021. In addition, for the remedy to be protective in the long-term, the following issues must be addressed: characterize/investigate the downgradient TCE plume; add vinyl chloride and chromium chemicals of concern to the OU-1 Record of Decision, clarify facility-wide institutional controls by updating the Installation Development Plan; and implement appropriate off-base Land Use Controls.

The issues that will be tracked by the EPA specific to OU-1 and the due date for implementing recommendations are presented below.

- The off-base downgradient TCE plume has not been adequately characterized and TCE concentrations, while trending downward, continue to exceed maximum contaminant levels (MCLs). Rights of entry are being obtained and an off-base investigation UFP QAPP Addendum will be prepared by January 2019.
- Off-base VI pathways have not been assessed and a protectiveness determination is deferred until a VI assessment of buildings that may be impacted by known groundwater contamination is completed by December 2019.

- Vinyl chloride and chromium have been identified as additional COCs and will be included as part of a ROD Amendment that will be prepared by December 2019.

OU 2 – On-Base Priority One Sites

Short-term Protective. The remedy at OU-2 currently protects human health and the environment because facility-wide LUCs preventing exposures to contaminated groundwater are in place, and monitoring of off-base residential water supply wells provides no evidence of exposure to contaminated groundwater at concentrations above MCLs. The USAF is actively sampling water supply wells and implementing removal actions to provide alternative drinking water for those sources with Per- and polyfluoroalkyl substances concentrations above the EPA Health Advisory of 70 parts per trillion. For the remedy to be protective in the long-term, the following actions need to be taken: continue to identify and mitigate risks due to exposure to PFAS; address the off-base arsenic, vinyl chloride and TCE plume and implement off-base LUCs at WP003; add vinyl chloride and arsenic as COCs in an Explanation of Significant Differences (ESD) for OU-3; and clarify facility-wide institutional controls by updating the IDP.

The issues that will be tracked by the EPA specific to OU-2 and the due date for implementing recommendations are presented below.

- Through the Preliminary Assessment/Site Investigation process, Fairchild AFB has confirmed that significant quantities of PFAS-containing Aqueous Film-Forming Foam were historically used at Site FT004 and released to the environment. USAF immediately began sampling off-base drinking water wells and has mitigated drinking water exposures identified to date through removal actions. Continued SI and removal actions are needed to mitigate drinking water exposures and a supplemental remedial investigation is needed to determine nature and extent of contamination. Once sufficiently characterized, USAF should implement institutional controls to prevent exposure. This work is ongoing.
- TCE continues to exceed MCLs in off-base well MW-120, and a slow moving detached plume has been identified. TCE has not been detected in downgradient residential wells and no drinking water exposures are currently occurring. A Feasibility Study Addendum and ROD Amendment are needed to analyze remedial alternatives to address the off-base plume. The due date for completing the FSA and completing the ROD Amendment is January 2020.
- Vinyl chloride and arsenic exceed their respective MCLs in shallow alluvial groundwater on-base and off-base and while regularly monitored, these constituents are not identified in the ROD as site COCs. An ESD will be prepared that includes vinyl chloride and arsenic as site COCs by December 2020.

OU 3 – On-Base Priority Two Sites

Short-term Protective. The remedy at OU-3 currently protects human health and the environment because LUCs preventing exposures to contaminated media are in place. The ROD did not specify specific Remedial Action Objectives for OT016, SD031, and FT032, but site closure objectives have been achieved at these sites. The remaining contaminants at sites OT017, ST006, SS009, and ST010 fall under the Comprehensive Environmental Response, Compensation, and Liability Act petroleum exemption and will be addressed under the Washington Department of Ecology Voluntary Cleanup Program. For the remedy to be protective in the long-term, facility-wide and site-specific LUCs should be clarified through

an update of the IDP and a ROD Amendment may be required to incorporate new COCs and remedial actions at site DP022 and DP024.

The issues that will be tracked by the EPA specific to OU-3 and the due date for implementing recommendations are presented below.

- New chemicals of potential concern have been identified at two sites that were not considered during the original RI/FS and subsequent ROD. An additional investigation is needed to address data gaps for site DP022 and DP024 and if additional COCs are discovered a complete risk assessment, feasibility study and ROD amendment will be required. If required, the due date for this ROD modification is December 2020.
- A limited field investigation at site DP012 revealed the presence of buried aircraft reciprocating valves that contain elemental sodium. Because the presence of these valves presents a potential safety and health hazard, the site is inspected on an annual basis. Facility-wide LUCs are in place and no unacceptable exposures have occurred, but an ESD to clarify and formalize site-specific ICs at site DP012 is needed by December 2020.

OU 5 – TCE Orphan Plumes (SS039)

Will be Protective. The remedy at OU-5 will be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risk. For the remedy to be protective in the long-term, facility-wide ICs should be clarified through an update of the IDP.

The issue that will be tracked by the EPA specific to OU-5 and the due date for implementing the recommendation is presented below.

- Current off-base LUCs to prevent the use of contaminated groundwater will need to be supplemented; however, no known off-base drinking water exposures are currently occurring. Further investigation of off-base contamination is required and if necessary, an appropriate decision document modification should outline what combination of LUCs will be used to meet off-base performance objectives. If required, the due date for a decision document amendment is December 2021.

Additional Issues that Apply to Multiple OUs

In addition to the OU-specific issues and recommendations presented above, the following issues will be tracked by the EPA regarding on-base and off-base LUCs:

- Proper implementation of on-base LUCs requires an updated and accessible IDP that describes what, why and where specific LUCs are needed for each site. This issue applies to OU-1, OU-2, OU-3 and OU-5. The due date for implementation is December 2019.
- A ROD Amendment is required that memorializes off-base LUCs and outlines what combination of institutional controls (i.e., restrictive covenants, permits, orders, zoning changes, state and local agency agreements) and engineering controls will be used to meet off-base performance objectives. This issue applies to OU-1 (Craig Road Landfill) and OU-2 (Site WP003). The due date for implementation is December 2019.

Finally, although the USAF has made a significant effort to investigate and mitigate exposures from PFAS that may have resulted from historical site activities using AFFF on base, for the remedy to be

protective in the long-term, the following issues should be addressed: the on-base and off-base extent of PFAS contamination related to AFFF use at Fairchild AFB must be characterized and further information obtained to evaluate long-term protectiveness.

Overall, the USAF has made good progress towards addressing historic hazardous substance releases to the environment. We value our strong working relationship and we look forward to continuing this cooperative effort going forward. The due date for the next Five-Year Review will be September 25, 2023.

If you have any questions, please contact Kim Prestbo at (206) 553-0239 or by email at prestbo.kim@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Sheryl Bilbrey', with a small 'for' written in cursive to the right.

Sheryl Bilbrey, Director
Office of Environmental Cleanup

cc: Marc Connally
Remedial Project Manager, Fairchild Air Force Base
Hun Seak Park
Washington Department of Ecology, Toxic Cleanup Program